

be scarce hereabouts, as Mr. Pearse, who has an extensive practical acquaintance with the ornithology of the district, was not acquainted with it, and had not previously met with specimens.

IX.—Notes on a 'Catalogue of the Accipitres in the British Museum,' by R. Bowdler Sharpe (1874). By J. H. GURNEY.

[Continued from vol. v. p. 370.]

(Plate III.)

MR. SHARPE places at the head of his subfamily "Buteoninae" the "Radiated Goshawk" of Gould's 'Birds of Australia,' under the title of "*Urospizias radiatus*."

I have already pointed out (Ibis, 1875, p. 364) that the generic name of *Urospizias* is not properly available for this species; and Mr. Sharpe has subsequently applied to it the new generic appellation of "*Erythrotriorchis*," which had been suggested as a suitable substitute (*vide* Notes by R. B. Sharpe on the rarer Accipitres of Australia, in P. Z. S. 1875, p. 337).

The two measurements given in Mr. Sharpe's Catalogue as those of a male and female of this species, have evidently both been taken from male birds; and in the paper above referred to, Mr. Sharpe corrects this inadvertence, and gives the measurements of an actual male and female, recently obtained by the British Museum from the interior of Queensland, together with a description of the female, which is in immature plumage, a stage in which this species had not been previously described.

Having myself had a recent opportunity of measuring an adult female of this rare Hawk, I may here add a note of its dimensions, viz. wing from carpal joint 16 inches, tarsus 3·5, middle toe s. u. 3.

I have never examined a skeleton of this species; but the considerable difference in size between the sexes, and the great prolongation of the middle toe, lead me to doubt whether Mr. Sharpe has taken a correct view in placing it among the Buzzards, instead of allowing it to remain among the Hawks,

where a place had been assigned to it in the most recent systematic works of Gould, Schlegel, and G. R. Gray.

The second genus in Mr. Sharpe's arrangement of the Buteoninae bears the title of *Heterospizias*, under which name Mr. Sharpe has separated, and, I think, legitimately, *Falco meridionalis* of Latham, a species which has been referred to no less than ten different genera by previous ornithological authors.

Mr. Sharpe places the genus *Tachytriorchis* third on his list; but it will be convenient for my purpose to postpone its consideration till after I have referred to the first species enumerated by him as belonging to the genus *Buteo*, the so-called "Chilian Sea-Eagle" *.

I quite agree with Mr. Sharpe in placing this fine species in the Buteonine subfamily; but I think it sufficiently distinct to make it advisable to retain for it the subgeneric name of *Geranoaëtus* proposed by Kaup, and adopted by some subsequent authorities, amongst the most recent of whom are Messrs. Sclater and Salvin, in their 'Nomenclator Avium Neotropicalium,' p. 119.

According to D'Orbigny ('Voyage dans l'Amérique Méridionale,' Oiseaux, p. 77), this species does not attain its full plumage till it has reached its fourth year; and its intermediate stages are described in considerable detail by that careful observer; but neither he nor Mr. Sharpe mentions a phase of plumage which occurs when the bird has nearly completed its progress towards maturity †, and which I will therefore describe from a specimen in the Norwich Museum, a female, obtained in Ecuador:—Upper surface as in Mr. Sharpe's de-

* *Vide* 'Gardens and Menagerie of the Zoological Society,' 1831, p. 85, also 'Revised List of the Vertebrated Animals in the Gardens of the Zoological Society,' 1872, p. 214.

† This phase does not occur in the case of every individual, and perhaps only in the females—as a young male from Chili, in the Norwich Museum, is evidently changing from the plumage designated by Mr. Sharpe as "young" into that which he defines as "adult," without passing through the intermediate stage to which I have here alluded. In the normal adult female the slaty black on the chest extends about an inch lower than it does in the adult male.

scription of the adult; the slaty black of the breast without any whitish tips to the feathers, and extending down to the extremities of the under tail-coverts, and over all the intermediate parts except the thighs, but intermingled on the abdomen with a few mottled feathers of two shades of grey, and with the under tail-coverts inconspicuously tipped with grey; the thighs clothed with mottled grey feathers, which, for the most part, resemble those interspersed amongst the black plumage of the abdomen; but in some of them the mottlings have already begun to assume the arrangement of the transverse markings with which, in the succeeding stage, all the tibial feathers are barred, in common with the remainder of the under surface except the chest.

In the succeeding stage the bird bears a remarkable general resemblance in its coloration and markings to its somewhat more northern and much scarcer ally, *Leucopternis princeps*.

In very old males of *Geranoaëtus melanoleucus* (and possibly in old females also; but of this I am not sure) the transverse bars of grey entirely disappear from the whole under surface, except the wing-linings, the flanks where covered by the wings, and the under tail-coverts; in such specimens the portions of the plumage from which these bars have disappeared are then pure white.

I think that Mr. Sharpe is mistaken in stating that the white tips to the grey feathers of the breast are "the remains of immaturity," as I have met with them in very old individuals, and do not recollect having ever seen an adult specimen in which they were absent; in some adult examples these white tips are to be found on several of the interscapular feathers as well as on the breast.

I may add that those portions of the upper surface in the adult bird which Mr. Sharpe describes as black are all slightly tinged with slate-colour; so that they may perhaps be more correctly described as "slaty black" than as "black" simply.

To return to the genus *Tachytriorchis*, Mr. Sharpe, following the late Dr. Kaup, separates under this title two species, *Buteo albicaudatus* and *B. abbreviatus*; but as I greatly doubt whether these two species really follow each other in natural

sequence, I propose to treat them both as comprehended in the genus *Buteo*, that genus being one which consists of an aggregation of several natural subgeneric groups, easy to perceive in studying the genus, though difficult to define by any characters save such as chiefly rest on peculiarities of coloration and markings at different ages.

Mr. Ridgway, in an able paper to which allusion has already been made in an editorial notice in 'The Ibis' for 1875, p. 500, proposes that the genus *Craxirex* should be used to include all those Buzzards which have "only three of the outer primaries emarginated on their inner webs;" but I fear that this is scarcely a character which can be satisfactorily used as a basis of generic or subgeneric distinction, inasmuch as it occasionally happens that the outline of the fourth primary varies somewhat as to the degree in which it is emarginated, or sinuated, in different individuals of the same species; and this is especially the case in *Buteo erythronotus*, in which most of the specimens which I have examined have had the fourth primary distinctly emarginated, though I have seen two examples in which the emargination was barely visible; and the latter seems to have been the case with the specimens examined by Mr. Ridgway, since he includes this species amongst those which have but three emarginated primaries, as he also does *B. poliosomus*, of which I have never examined a specimen with less than four primaries distinctly emarginated.

In considering the genus *Buteo* in the extended sense to which I have just alluded, I propose to commence by referring to *B. erythronotus*, and to those species which appear to me to be its nearest allies.

Mr. Sharpe gives the length of the wing in the female of *B. erythronotus* as 18·5 inches, which I think must be a misprint, as in the largest female that I have measured the length from the carpal joint to the tip of the wing is only 16·5.

From an examination of the series of specimens of this Buzzard in the Norwich Museum, I am led to believe that the male bird passes through three distinct phases of plumage, the first being that which is described by Mr. Sharpe as "young," and which is common to both sexes, the second

resembling the dress of the adult female, and the third that which Mr. Sharpe correctly designates as the plumage of the "adult male."

Mr. Sharpe includes *Buteo varius* of Gould amongst the synonyms of *B. erythronotus*—which I am able to confirm, as the type specimen is now in the Norwich Museum, and is an immature example of this species.

There is also included amongst the synonyms of *B. erythronotus* in Mr. Sharpe's work *Buteo unicolor* of D'Orbigny; but this I am convinced is a mistake, as the Buzzard described by D'Orbigny under that name is decidedly smaller than *B. erythronotus*, and very differently coloured.

In the list given by Mr. Sharpe of the specimens of *B. erythronotus* preserved in the British Museum, there is included an immature skin from the island of Masafuera, that should no doubt be referred to the very interesting allied species *Buteo exsul*, which has only been obtained on that island, and which, subsequently to the publication of Mr. Sharpe's volume, has been described by Mr. Salvin at page 371 of 'The Ibis' for 1875.

Messrs. Salvin and Godman have very kindly permitted me to examine their specimens of this fine Buzzard; and I have thus been enabled to observe that the white margins to the lesser wing-coverts and interscapulary feathers are broader and more numerous in the adult female than in the adult male; but, beyond this remark, I have nothing to add to the full description which Mr. Salvin has already published, except to note that in this species the fourth primary is but very slightly emarginated.

Another species closely allied to *Buteo erythronotus* is *Buteo poliosomus*. The first plumage of this Buzzard is not described in Mr. Sharpe's work; and I therefore propose to give some particulars respecting it, taken from three specimens in that stage obtained in the Falkland Islands, and now preserved in the Norwich Museum. These bear a general resemblance to the corresponding plumage of *B. erythronotus*, but are much more fuliginous in the tone of their colouring. On their upper surface the scapulars, interscapulars, and wing-

coverts, especially the latter, exhibit a considerably larger proportion of fuliginous markings, and a proportionately smaller admixture of fulvous spots, than are to be found in the young of *B. erythronotus*, in contrast with which there is, however, in the young of *B. poliosomus*, a conspicuous nuchal patch of pale luteous, varied by dark brown shaft-marks in the centre of each feather.

On the under surface the young *B. poliosomus* is by far the darker bird of the two, except as regards the throat, which is of an equally deep brown in both species. In the first plumage of *B. poliosomus* the entire colouring of the underparts of the body is dark fuliginous brown, with the exception of narrow fulvous edgings to the feathers on the throat, of some small fulvous spots on the sides of the breast and abdomen, and of similar but larger spots on the thighs and under tail-coverts. The tail is alike in both species.

The specimen described by Mr. Sharpe as a "female (? in changing plumage)" appears from its dimensions to be more probably a male not fully adult*; and this circumstance, combined with the fact that a very nearly adult male from Chili (in the Norwich Museum) still retains slight rufous tips to some of the feathers on the sides of the neck, leads me to believe that in this species, as in *B. erythronotus*, the male assumes a plumage resembling that of the adult female, intermediately between its first dress and the final stage of its adult coloration.

I believe that the plumage described by Mr. Sharpe as "adult" is that of the adult male only, and that the adult female is always rufous on the back, and more or less so on the under surface also.

Assuming this view to be correct, the following are the measurements of two males and four females preserved in the Norwich Museum, all of which are either nearly or fully adult :—

* The "blackish" tint of the slate-coloured parts of the plumage in this specimen is indicative of its not being a fully mature bird, the slate-coloured portions of the plumage being a clear grey in fully adult birds of both sexes.

	Wing from carpal joint. inches.	Tarsus. inches.	Middle toe, s. u. inches.
Males.....	14·9 to 15	3·2 to 3·5	1·6 to 1·8
Females	15·8 to 16·4	3·25 to 3·5	1·6 to 1·8

In one of these females the entire head, throat, sides and front of neck, and upper breast are clear unbroken slate-colour; the hinder neck, mantle, and upper scapulars rufous; the lower scapulars rufous mingled with slaty, most of the last-named feathers being particoloured, with the shafts slaty, and with that tint spreading, on the feathers nearest the wing, to the right of the shaft, and on those nearest the centre of the back to the left of the shaft; the remainder of the upper portion of the plumage resembles that of the adult male, except that the interspaces between the dark transverse bars on the tertiaries are white instead of pale grey; the lower breast, abdomen, and sides are rufous, darker than the mantle, and slightly mingled with slaty; the under tail-coverts slaty, transversely barred with white, and the thighs entirely slate-coloured.

Another female, shot from the nest in the month of October, differs from the above in having the whole under surface, from the chin to the vent, dark rufous; this, however, is mingled and tinged with a dark slaty hue on the upper breast and on the abdomen, but not on the lower breast.

A third female resembles that last described, but with a larger admixture of slate-colour on the under surface. This specimen was marked as a female by the collector, who has also attached to it a memorandum that the irides were "red-dish brown."

The fourth female much resembles the second, but still retains on the wing-coverts the fuliginous plumage of its immature dress.

Passing on to the consideration of *Buteo albicaudatus*, I may observe that though this species in its adult plumage exhibits a remarkable general resemblance to *B. erythronotus*, it always differs from that Buzzard in three particulars, viz. that the rufous on the back never extends to the interscapular feathers, that it is common to the adults of both sexes,

and that the wings reach up to or slightly beyond the extremity of the tail.

Mr. Sharpe describes the "general plumage" of the young birds of this species as "black;" but in the youngest specimens which I have seen its colour is dark brown, which subsequently deepens into black in the intermediate stage, and ultimately passes from black to slate-colour when the bird assumes its fully adult dress; the "rufous spots" on the scapulars, and the similarly coloured margins of the lesser wing-coverts, spoken of in Mr. Sharpe's description of the "young" bird, are indicative of the commencement of the second stage of plumage, being absent in the first phase of coloration which this species assumes; the second plumage, when more completely developed, exhibits a deeper tint of rufous than exists in the fully adult bird, and often extending over a large scapulary area, the rufous feathers being also variegated, in this stage, by broad blackish shaft-marks.

Mr. Sharpe, in his description of the young bird, mentions the lores as being "conspicuously white;" this white, or yellowish white spot, which I should rather describe as covering the parotic region, seems always to disappear when the second stage of plumage has been fully attained.

Messrs. Salvin and Godman's collection contains a specimen in the first stage of plumage from the Pacific slope of Guatemala, in which the fuliginous colouring so greatly predominates over the fulvous on the under surface, as to be almost unbroken from the chin to the vent; but it is more usual in individuals of that age to find the under surface more or less variegated, as indicated by Mr. Sharpe.

In describing the adult plumage, Mr. Sharpe alludes to the axillaries as being "sometimes tinged with rufous." I have never met with this in fully adult specimens; but in the penultimate stage a rufous tinge more or less pervades not only the axillaries, but also the under wing-coverts and the sides of the body; on all these parts the rufous tints are more or less mingled with black, forming transverse bars of intermixed dark coloration with white interspaces between them. At this stage a somewhat similar transverse barring exists on the

abdomen, and a paler brownish barring on the thighs ; but both these parts are ultimately of a pure white.

The collection of Messrs. Salvin and Godman and that of the Norwich Museum both comprise specimens of a Buzzard from tropical South America nearly related to *B. albicaudatus*, but principally differing from that species by a peculiarity somewhat resembling that which distinguishes *B. poliosomus* from *B. erythronotus*, viz. the slaty colouring of the underparts in the adult plumage. This Buzzard is not mentioned in Mr. Sharpe's work ; but Mr. Salvin agrees with me in considering it to be a distinct species, and has suggested for it the specific name of "*B. hypospodius*," which I propose to adopt as appropriately characteristic of the peculiar coloration of its under surface.

I subjoin a description of the examples of *Buteo hypospodius* which have come under my notice, premising that in this species the characters of the legs, feet, and wings resemble those of *B. albicaudatus* : the upper part of the tarsus is feathered in front for about an inch ; the wings have the three first primaries only emarginated ; the third primary is the longest ; but the fourth nearly equals it, and in some specimens is not perceptibly shorter.

The first three specimens to which I shall allude are in the collection of Messrs. Salvin and Godman ; the remaining three are preserved in the Norwich Museum.

No. 1, from Medellin, in New Granada, has the entire head, neck, and throat of a dark slate-colour, the scapulars and interscapulars a little paler, the former with broad brownish grey tips to most of the feathers, the latter with similarly coloured tips, but narrower, and with concealed white bases to the feathers ; the lower back and rump are of a similar slate-colour, which becomes paler as it approaches the tail-coverts, and is crossed with alternate but irregular transverse bars of grey and white on the basal portions of the feathers ; the upper tail-coverts are white, with dark shaft-marks and dark grey transverse bars, the latter narrowest on the feathers nearest the tail ; the general colour of the upper surface of the wings is slaty, darkest on the lesser and middle wing-coverts, where

most of the feathers show narrow indistinct brownish tips; the primaries are black below the level of the emargination, above which they are crossed with irregular alternate bars of darker and lighter grey; the secondaries and tertiaries are similarly but more regularly barred throughout, and with the paler bars darker than those on the primaries; all the secondaries and tertiaries have a broad dark tip, narrowly edged at the extremity of each with a shade of pale brown, which is also just perceptible on the tips of the primaries; the tail is white, but with a tinge of grey on the external webs of all the rectrices except the central ones, this tinge being deepest on the outermost pair, the tail is also barred with eight narrow and irregularly dark transverse lines, which are more distinct on the outer than on the central rectrices, and least so on the latter as they approach the upper tail-coverts; below these transverse lines there is a broad black band, succeeded by a much narrower band of greyish brown, below which the tail is narrowly tipped with white.

The breast and wing-linings are of a slate-colour, resembling that of the head, neck, and throat; the feathers of the bastard wing are barred on their under side with alternate markings of darker and lighter grey, succeeded by a dark slaty tip; the outer axillaries are dark grey, the inner axillaries similar, but with irregular white transverse bars divided by dark shaft-marks; the under surface of the remiges resembles the upper surface, but with the inner webs near the base finely mottled with intermingled white and grey; the abdomen and thighs grey, but with many of the feathers, especially on the thighs, transversely barred with white; the under tail-coverts resemble the upper tail-coverts, both in colour and in markings.

No. 2, from the mountain region of Merida, in Venezuela, and marked as a female by the collector, only differs from No. 1 in the following particulars, viz.:—the lesser wing-coverts and scapulars, especially the former, are tinged with rufous, which also appears, though less decidedly, on the rump, bastard wing, axillary feathers, and abdomen; the thighs are dark rufous, crossed by narrow bars of white, the

latter being most distinct on those feathers which overhang the upper portion of the tarsus ; on the outer sides of the thighs the rufous is mingled with transverse bars, not only of white, but also of dark and pale grey ; the under tail-coverts are crossed by alternate bars of rufous and white.

No. 3, from the same district of New Granada as No. 1, resembles No. 2, but exhibits a considerable amount of deep rufous on the upper portion of the wing-lining, the rufous feathers in that part having blackish shaft-marks of varying breadth, and the broadest of these being situate below the carpal joint. In this specimen the rufous on the thighs does not assume the arrangement of transverse bars.

No. 4, from Venezuela, and marked as a female by the late M. Jules Verreaux, resembles No. 2 ; but the rufous portions of the plumage are not so strongly tinged with that colour, except on the thighs ; the wing-lining also exhibits some rufous, but much less than is the case in No. 3. It also differs from No. 2 in the absence of rufous from the under tail-coverts, some of which are barred alternately with white and grey, also in having white interspaces between the transverse bars on the inner webs of the tertiaries, and in the grey tint of the tail being diffused over the central as well as the lateral rectrices.

No. 5, from the river Amazons, but without any more definitely known locality, differs from No. 1 in having all the parts which in that specimen are of different shades of slaty grey, black with only a very slight tinge of slate-colour (though the transverse bars on the wings are discernible in two different shades of slaty black), also in having no white transverse bars on the abdomen and thighs (the latter of which show in places a very slight tinge of rufous), in the transverse bars on the tail, as well as those on the upper and under tail-coverts, being broader, darker, and more distinct, and, lastly, in the interspaces between the transverse bars on the inner webs of the tertiaries being more or less entirely white.

No. 6, from Brazil, but from what part of that country I am unable to say, resembles No. 5, except that the slaty black plumage of the breast is slightly tinged with rufous brown,

and that the scapulars are crossed with concealed transverse bars of white and pale grey, some of which are also slightly tinged with rufous.

The following are the comparative dimensions of the six specimens above described :—

	Wing from carpal joint.	Tail.	Tarsus.	Culmen from cere.	Middle toe, s. u.
No. 1	16·7	6·8	3·4	1·1	1·75
No. 2	16·5	6·9	3·5	1·1	1·7
No. 3	16·8	7·1	3·6	imperfect.	1·6
No. 4	16·8	7·1	3·4	1·1	1·7
No. 5	17·7	7·1	3·4	1·1	1·7
No. 6	16·6	7·1	3·6	1·1	1·5

Nos. 1 and 2 have been portrayed in the annexed plate (Plate III.), which will assist the reader in recognizing this interesting Buzzard.

I believe that the first plumage of *Buteo hypospodius* is still undescribed, that Nos. 5 and 6 in the above list are in the second plumage, Nos. 2, 3, and 4 in the third plumage, and No. 1 in the fourth. I would further hazard a conjecture that the fourth plumage will prove to be attained by the males only, and that the third plumage will be found, though common to both sexes, to be the final dress of the female.

The five species to which I have just referred, *Buteo erythrotus*, *B. exsul*, *B. poliosomus*, *B. albicaudatus*, and *B. hypospodius*, appear to me to form a natural group, for which the name of *Tachytiorchis* might, I think, be conveniently retained, and legitimately so, as it embraces the species *B. albicaudatus*, which was the only one originally included by Kaup under that subgeneric title.

Nearly allied to this group, but, I think, not properly to be included in it, is the curious *Buteo galapagensis*, for the reception of which Mr. Gould instituted his subgenus *Craxirex*.

I have nothing to add to Mr. Sharpe's account of this species, except to remark that the sexes differ in size only, and not in coloration, that being a point to which Mr. Sharpe does not in this instance refer.

[To be continued.]



J. G. Kulemans del.

M. & W. Blanchard sculp.

BUTEO HYOSPODIUS